



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,059	12/10/2003	Michael A. Centanni	ST8613US	8624

22203 7590 04/13/2007
KUSNER & JAFFE
HIGHLAND PLACE SUITE 310
6151 WILSON MILLS ROAD
HIGHLAND HEIGHTS, OH 44143

EXAMINER

CHORBAJI, MONZER R

ART UNIT	PAPER NUMBER
----------	--------------

1744

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/734,059

Applicant(s)

CENTANNI, MICHAEL A.

Examiner

MONZER R. CHORBAJI

Art Unit

1744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-15 is/are pending in the application.
- 4a) Of the above claim(s) 1-9 and 16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/8/04&11/6/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This general action is in response to the election/restriction filed on 01/26/2007

Election/Restrictions

1. Applicant's election without traverse of claims 10-12 and 13-15 in the reply filed on 01/26/2007 is acknowledged.
2. Claims 1-9 and 16 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected apparatus claims, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 01/26/2007.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 10-11 and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pai et al (U.S.P.N. 6,156,267) in view of Childers (WO 97/47331).

Art Unit: 1744

Regarding claims 10 and 13, Pai teaches combining conventional sterilants (col.4, lines 50-54) such as vaporized hydrogen peroxide and ozone (col.7, line 67 and col.8, lines 1-3) by providing sensors for measuring the concentration of each sterilant. Pai discloses a sealable chamber (figure 1:1) having an inlet (figure 1:2) for introducing ozone and vaporized hydrogen peroxide and an outlet (figure 1:4) for removing the sterilants and sensing the concentration of ozone within the chamber (figure 1:13). However, Pai does not specifically teach that his sterilization system may include a recirculating closed loop. Childers recirculates vapor hydrogen peroxide (figure 6:18) in combination with a carrier gas (page 7, lines 24-26) through a closed loop (see the directional arrows in figure 6) conduit in communication (figure 6:12 and 14) with a sealed chamber (figure 6:10) so that superior kill potentials and more efficient sterilization is obtained by partially and selectively drying the carrier gas in response to the sterilization parameters (Childers, page 5, lines 25-37). Childers teaches the following: recirculating carrier gas throughout the system (see the directional arrows in figure 6 and page 5, lines 27-29), delivering vaporized hydrogen peroxide into the recirculating gas upstream of the sealed chamber (figure 6:18 page 5, lines 20-23) and breaking down vaporized hydrogen peroxide to form water and oxygen downstream from the outlet (figure 6:20 and page 8, lines 13-19) of the sealed chamber. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a sterilant/carrier gas recirculating closed loop system into Pai's method as taught by Childers so that superior kill potentials and more efficient

Art Unit: 1744

sterilization is obtained by partially and selectively drying the carrier gas in response to the sterilization parameters (Childers, page 5, lines 25-37).

Regarding claims 11 and 14-15, Pai does not specifically teach that his sterilization system may include a sterilant/carrier gas recirculating closed loop and decomposing vaporized hydrogen peroxide. However Childers teaches recirculating air throughout the system (see the directional arrows in figure 6 and page 5, lines 14-16) and breaking down vaporized hydrogen peroxide (figure 6:20 and page 8, lines 13-19) to form water and oxygen. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a sterilant/air recirculating closed loop system into Pai's method as taught by Childers so that superior kill potentials and more efficient sterilization is obtained by partially and selectively drying the carrier gas in response to the sterilization parameters (Childers, page 5, lines 25-37).

6. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Pai et al (U.S.P.N. 6,156,267) in view of Childers (WO 97/47331) as applied to claim 10 and further in view of Manning (U.S.P.N. 6,022,456).

While Pai teaches combining ozone with vaporized hydrogen peroxide, he does not specifically show how ozone gas is generated or Childers. However, Manning electrically generates ozone (col.2, lines 43-50) from recirculating oxygen gas (for example, col.6, lines 40-43) since providing a loop system permits reusing oxygen where more efficient ozone production and less cost are obtained (Manning, col.4, lines 6-8). Therefore, it would have been obvious to one having ordinary skill in the art at the

Art Unit: 1744

time the invention was made to provide Manning's ozone/oxygen recirculating system into Pai's method since providing a loop system permits reusing oxygen where more efficient ozone production and less cost are obtained (Manning, col.4, lines 6-8).


Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MONZER R. CHORBAJI whose telephone number is (571) 272-1271. The examiner can normally be reached on M-F 9:00-5:30.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, GLADYS J. CORCORAN can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRC


GLADYS JP CORCORAN
SUPERVISORY PATENT EXAMINER